

BELYAYEV, V. T.

Experience in conducting industrial seminars.
Mashinostroitel' no.6:45 Js '60. (MIRA 13:8)
(Technical education)

BELYAYEV, V.T.

Automatic line of modernized machine tools. Mashinostroitel'
no.9:21 S '61.

(Machine tools)

(Automation)

(MIRA 14:10)

18

CA

New methods for preventing the rupture of pyrite burner shells. V.V. Ilyayev, R. M. Kotikov, and S. P. Epifanov. *Khimiya Prom.* 1945, No. 11, 21-22. The thermal changes taking place in a pyrite burner, and the changes which the various construction materials of the furnace undergo are calcd. From these data are calcd. the allowances which must be made and the strength required to prevent rupture of shells. M. H.

ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION

100000 00	100000 000000	100000 000000	100000 000000
0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9

BELYAYEV, Vera-Vladimovna, prepodavatel'; KUPRIYANOVA, A.T., otv. za vy-
pusk; BARINOV, N.A., red.; SHAKHOVA, L.I., red.; DORODNOVA, L.A.,
tekhn. red.

[Teaching the course "General technology of metals" in technical
schools] Prepodavanie kursa "Obshchaia tekhnologiya metallov" v
tekhnicheskoy uchebnoy uchebnykh. Moskva, Vses.uchebno-pedagog.izd-vo,
Proftekhizdat, 1960. 74 p. (MIRA 14:12)

1. Tul'skoye tekhnicheskoye uchilishche No.1 (for Belyayeva).
(Metals--Study and teaching)

BELYAYEV, V.V., inzh.-kapitan 1 rango

"Submarines of the imperialist powers" by V. N. Gerasimov, V. F. Droblenkov. Reviewed by V. V. Beliaev. Mor.sobr. 44 no.1:92-96
Ja '61. (MIRA 14:3)

(Submarine boats)

BELYAYEV, V.V., inzh.-kapitan pervogo ranga; BEREZOVSKIY, V.N., kapitan
pervogo ranga; KVITNITSKIY, A.A., kapitan pervogo ranga;
KOVALEV, A.P., kapitan pervogo ranga zapase; ROBINOV, A.I.,
kontr-admiral, red.; MASLOVA, N.Ya., tekhn. red.

[Antisubmarine defense in modern warfare; collection of trans-
lated articles]Protivolodochnaya oborona v sovremennoi voine;
sbornik perevodnykh statei. Moskva, Voenizdat, 316 p.

(MIRA 15:10)

(Submarine warfare)

L 21405-66 EWT(1)/EWT(m)/EPF(n)-2/I/ETC(m)-6 WW/DJ
ACC NR: AP6009889 (A) SOURCE CODE: UR/0413/66/000/004/0081/0081

INVENTOR: Sharoglazov, B. A.; Belyayev, V. V.

ORG: none

TITLE: Device for checking oil-pump output. Class 42, No. 179020

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 81

TOPIC TAGS: internal combustion engine, oil pump, test equipment, oil pressure

ABSTRACT: An Author Certificate has been issued for a device for checking the output of internal-combustion-engine oil pumps. The unit contains a casing, series-connected intake and overflow pipes, and a plunger for varying the cross-sectional area of the overflow pipe. To check the pump on a running engine, the pipes are mounted on an

Card 1/2

UDC: 681.121.8:621.43-728

L 21405-66

ACC NR: AP6009889

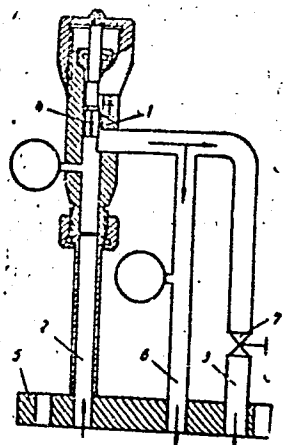


Fig. 1. Oil-pump checking device

- 1 - Casing; 2 - intake pipe; 3 - overflow pipe; 4 - plunger; 5 - assembly plate;
- 6 - additional pipe; 7 - throttle valve.

assembly plate to facilitate connection to the oil line. An additional pipe is connected parallel to the overflow pipe. To develop a given optimum pressure in the oil system, the overflow pipe is fitted with a throttle valve. Orig. art. has: [LB]

SUB CODE: 21, 14/ SUBM DATE: 18Aug64/ ATD PRESS: 422/

Card 2/2 OLA

BELYAYEV, V.V., inzhener.

Automatic transfer line for the production of bar-shaped articles
made of wood. Biul.tekh.inform. 3 no.5:19-22 '57. (MLRA 10:10)
(Machinery, Automatic) (Woodwork)

BELYAYEV, V.V.
BELYAYEV, V.V., inzh.

Improving organization in woodworking enterprises. Biml. tekhn. inform.
3 no.11:8-10 N '57. (MIRA 11:1)
(Woodworking industries)

* BELYAYEV, V.V. inzh.

Conveying unit for manufacturing laminated glued timber products.
Bul. tekhn. inform. 4 no.1:25-26 Ja '58. (MIRA 11:2)
(Plywood)

BELYAYEV, V.V., inzh.

Automatizing cross sawing of lumber and processing of bar-shaped
window elements. Biul.tekh.inform. 4 no.11:13-14 N '58.
(MIRA 11:12)

(Woodworking industries) (Automatic control)

BELYAYEV, V.V., inzh.-kapitan 1-go ranga

Modern problems of military shipbuilding. Mor. sbor. 48
no.2:79-84 F '65. (MIRA 18:11)

BELYAYEV, V.V., kandidat tekhnicheskikh nauk.

Supporting structures for short-jet sprinklers with wide coverage. Sel'-
khoz mashina no.11:15-17 N '53.

(MLRA 6:11)

(Sprinklers)

BELYAYEV, V.V., kandidat tekhnicheskikh nauk [reviewer].

Review of S.P.Kazakov and M.A.Markin's article "New multiconduit nozzle with mechanical vibrators." Sel'khoz mashina no.11:31-32 N '53. (MLRA 6:11)
(Nozzles) (Kazakov, S.P.) (Markin, M.A.)

BEKYAYEV, V.V., kandidat tekhnicheskikh nauk.

Testing the strength of ribs of sprinklers. Sel'khoz mashina
no. 7:25-27 J1 '54. (MLRA 7:7)
(Sprinklers)

BELYAYEV, V.V.

Slotted sprinkler nozzles. Sel'khoz mashina no.12:14-16 D '55.
(Nozzles) (MLRA 9:3)

^Y
~~BELYAEV~~, Viktor Vasil'yevich, kandidat tekhnicheskikh nauk; LEBEDEV,
Boris Mikhaylovich, kandidat tekhnicheskikh nauk; STRUKOV, N.I.,
kandidat tekhnicheskikh nauk, retsenzent; ZHILINSKIY, V.A.,
kandidat tekhnicheskikh nauk, redaktor; YEGORKINA, L.I., redaktor
izdatel'stva; UVAROVA, A.F., tekhnicheskii redaktor

[Sprinkling machines; construction, calculation, operation and
testing] Dozhdeval'nye mashiny; konstruktzii, raschet, ekspluatatsiia
i ispytaniia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit.
lit-ry, 1957. 231 p. (MLRA 10:5)
(Sprinkler irrigation)

BELYAYEV, V.V., kand. nauk.

Sprinkling machines. Dokl. TSKhA no.27:145-150 '57. (MIRA 11:4)
(Sprinklers)

BELYAYEV, V.V., inzhener-kapitan 1-go ranga

Some aspects of the development of service ships abroad.

Mor. sbor. 48 no.4:87-91 Ap '65.

(MIRA 18:6)

VOLKOV, A.A.; MURATKHODZHAYEV, N.K.; ZEN'KOVICH, S.G.; SINITSYN, R.V.;
BELYAYEV, V.V.

Radiation load of medical personnel working with Au¹³⁹ granules
in a neuro-oncological clinic. Med. rad. 8 no.5:39-43 My '63.
(MIRA 17:5)

1. Iz Leningradskogo neyrokhirurgicheskogo instituta imeni
prof. A.L. Polenova.

SHUMYGIN, D.Ia., polkovnik meditsinskoy sluzhby; BELAYEV, V.Ye.,
podpolkovnik meditsinskoy sluzhby

Function of the adrenal cortex in burn disease. Voen.-med.
zhur. no.3:38-42 '65. (MIRA 18:11)

BELYAYEV, V.YE.

BELYAYEV, V.Ye. (Leningrad)

Prothrombin level of the blood in hypertension and its change
after the application of leeches. Klin.med. 35[1.e.34] no.1
Supplement:4 Ja '57. (MIRA 11:2)

1. Iz kliniki gosspital'noy terapii (nach. - chlen-korrespondent
AMN SSSR prof. N.S.Molchanov) Voenno-meditsinskoy ordena Lenina
akademii imeni S.M.Kirova.
(HYPERTENSION) (BLOOD--EXAMINATION) (LEECHES)

BELYAYEV V. YE.
BELOV, N.A., mayor meditsinskoy sluzhby; BELYAYEV, V.Ye., podpolkovnik
meditsinskoy sluzhby

Functional changes in the internal organs in burns. Voen-med.zhur.
no.8:11-15 Ag '57. (MIRA 10:12)
(BURNS, physiology,
internal organs (Rus))

BELYAYEV, V.Ye., polkovnik meditsinskoy sluzhby; KLYACHKIN, L.M., payor
meditsinskoy sluzhby

Use of adrenocorticotrophic hormone, cortisone, and prednisone in
the treatment of burns. Voenn.-med. zhurn. no.8:38-43 Ag '60.

(BURNS AND SCALDS)
(CORTISONE)

(ACTH)
(PREGNADIENETRIONE)

(MIRA 14:7)

1. BELYAYEV, Ya.
2. USSR (600)
4. Moving-Picture Projectors
7. Economizing on moving-picture projector carbons N. Voloskov. *Kinomekhanik*, No. 3, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

BELYAEV, YA. V.

Orlon, M. V. and Belyaev, Ya. V. "Planning of universal sectional NIIP system of 33 thousand hatcheries," Trudy Nauch.-issled. in-ta ptitsevodstva, Vol. XIX, 1948 p. 217-39

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

BELYAYEV, Ye., Eng.

What should the municipal engineer be like. Zhil. -kom. khoz. 2 no. 8, 1952

TSETSINOVSKIY, V., kand.tekhn.nauk; PTUSHKINA, G., nauchnyy sotrudnik;
BELYAYEV, Ye., nauchnyy sotrudnik

Ways for improving the grading of shelled corn at plants and grain
procurement points. Muk.-elev. prom. 24 no.9:11-14 S '58.
(MIRA 11-10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov
yego pererabotki (for TSetainovskiy, Ptushkina). 2. Vsesoyuznyy
institut sel'skokhozyaystvennogo mashinostroyeniya (for Belyayev).
(Corn (Maize)--Grading)

BELYAYEV, Ye., kand.tekhn.nauk; YAKOBSON, N., inzh.

New type of bridge with a flexibel design layout. Prom. stroi. i inzh.
soor. 5 no.2:49-50 Mr-Ap '63. (MIRA 16:4)
(Cranes, derricks, etc.—Design and construction)

IVANOV, Nikolay Alekseyevich; BELYAYEV, Ye.A., ctv.red.; DEMIN, A.I.,
red.isd-va; KRASNAYA, A.K., tekhn.red.

[Present-day Tunisia] Sovremenniyi Tunis. Moskva, Izd-vo
vostochnoi lit-ry, 1959. 130 p. (MIRA 12:5)
(Tunisia)

VEREMEYEV, A.P., inzh.; BELYAYEV, Ye.A., inzh.

The SKNK-6 combined corn planter and fertilizer spreader.
Trakt. i sel'khoz mash. 32 no.2:32 F '62. (MIRA 15:2)
(Planters (Agricultural machinery))

VEREMEYEV, A.P.; BELYAYEV, Ye.A.

The SKNK-6 combined corn planter. Biul.tekh.-ekon.inform. no.2:
65-66 '62. (MIRA 15:3)
(Planters (Agricultural machinery))

BELYAYEV, Ye.A., inzh.

Future development of corn drills for 1962-1965. Trakt. i
sel'khoz mash. 32 no.10:32-33 0 '62. (MIRA 15'9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokho-
zyaystvennogo mashinostroyeniya.

(Corn (Maize))

(Drill (Agricultural implement))

POTEKHIN, I.I., glav. red.; BARANOV, A.N., red.; BELYAYEV, Ye.A., red.;
GELLER, S.Yu., red.; GRAVE, L.I., st. nauchnyy red.; GRIGOR'YEV,
A.A., red.; GUBER, A.A., red.; KULACIN, G.D., red.; MALIK, Ya.A.,
red. MANCHKHA, P.I., red.; MILOVANOV, I.V., red.; NERSESOV, G.A.,
red.; OL'DEROGGE, D.A., red.; ORLOVA, A.S., red.; POPOV, K.M.,
red. ROZIN, M.S., kand. ekon. nauk, red.; SMIRNOV, S.R., red.;
UFIMOV, I.S., red.; SHVEDOV, A.A., red.; YASTREBOVA, I.P., red.;
PAVLOVA, T.I., tekhn. red.

[Africa; encyclopedia] Afrika; entsiklopedicheskiy spravochnik.
Glav. red. I.I.Potekhin. Chleny red. kollegii: A.N.Baranov i dr.
Moskva, Vol.1. A - L. 1963. 474 p. (MIRA 16:4)

1. Sovetskaya entsiklopediya, Gosudarstvennoye nauchnoye izdatel'-
stvo, Moscow.

(Africa--Dictionaries and encyclopedias)

BELYAYEV, Ye.A., inzh.; YAKUBOV, I.U., inzh.

Automation in weighing ores. Gor.zhur. no.1:74 Ja '63.

(MIRA 16:1)

1. Ingichkinskoye rudoupravleniye Uzbekskogo soveta narodnogo
khozyaystva.

(Ores)

(Weighing machines)

(Automatic control)

SKORNYAKOVA, L.K.; BELYAYEV, Ye.D., red.

[Pediatrician's handbook on organizational problems] Spravochnik
pediatra po organizatsionnym voprosam. Moskva, Medgiz, 1958. 341 p.
(PEDIATRICS) (MIRA 11:5)

DELYAYEV, Yo. I.

OBSTETRICS and GYNECOLOGY

DECEASED

c/1964

1964

L 17975-65 EWT(1)/EWA(b) Pb-L/Pa-L AMD/APGC(c) JK

ACCESSION NR: AP5002640

S/0016/64/000/010/0032/0037

AUTHOR: Belyayev, Ye. I.

TITLE: A study of the cytotoxic effect of staphylococcus toxin on tissue cultures. Report 1. Selection of the tissue culture most sensitive to the effect of staphylococcus toxin

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 10, 1964, 32-37

TOPIC TAGS: toxicology, tissue disease, bacteria

Abstract: Eleven types of tissue cultures at various stages of growth (three primarily trypsinized and eight reinoculated strains) were tested with three standard Staphylococcus toxins. A day-old culture of fibroblasts from a human embryo proved the most sensitive. The strength of the toxin depended on its age. Orig. art. has 3 tables

ASSOCIATION: Gor'kovskiy institut epidemiologii i mikrobiologii (Gor'kiy Institute of Epidemiology and Microbiology)

SUBMITTED: 23Nov63

ENCL: 00

SUB CODE: LS

NO REF SOV: 002

OTHER: 005

JPRS

Card 1/1

SABININ, Yu.A.; BELYAYEV, Ye.N.; MYASNIKOV, V.A.

Alternating current photoguides with analyzing optics for small-diameter telescopes. Izv.Krym.astrofiz.obser. 23:174-183 '60.

(Photoelectric measurements)

(MIRA 13:10)
(Astronomical photography)

3,1220 (1051, 1114)

30496
S/194/61/000/008/037/092
D201/D304

AUTHORS: Sabinin, Yu.A., Belyayev, Ye.N. and Myasnikov, V.A.

TITLE: A.C. photo-guides with assaying optics for small diameter instruments

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 40, abstract 8 V311 (Izv. Krymsk. astrofiz. observ., 1960, 23, 174-183)

TEXT: The principle is considered of operation of 1- and 2-coordinate photoelectric follow-up systems (photoguides) for guiding or correcting the movement of astronomical instruments. The purpose of photoguides is to determine the magnitude of the angular error between the optical axis of the instrument and the object being observed and to send a control signal to a drive which reduces this error to the required minimum. The photoguide component which determines the direction and the deviation of the object picture from the optical axis, is either a two (for a single ordin- ✓

Card 1/2

A.C. photo-guides...

30496

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D201/D304

ate system) or four-faced (for a two-coordinate system) glass prism which puts the light beam from the object being observed into 2 or 4 light beams. Each of the beams is transmitted through a mechanical light chopper (modulator) in the shape of a disc with slits or holes and applied next to the cathode of an antimony-caesium photomultiplier. The output voltage from the multiplier is amplified and applied to the control winding of a 2-phase asynchronous motor which shifts the optical axis of the photoguide together with that of the instruments, decreasing thus the tracking error. Analysis is given of operation of 1- and 2-coordinate photoguides. The procedure is suggested of calculating the limit sensitivity of a photoguide and the results of experiments with photoguides with assaying optics are given. 7 figures. [Abstracter's note: Complete translation]

Card 2/2

35070

S/712/60/023/000/004/014
D218/0301

3,1200

AUTHORS: Sabinin, Yu. A., Belyayev, Ye. N. and Myshnikov, V. A.

TITLE: Alternating current photoguide for analyzing optics
for astronomical telescopes

SOURCE: Akademiya nauk SSSR. Kry. say. zhurn. k vuzovskiy observatoriya, v. 2, Moscow, 1966, 17-183

TEXT: In the photoguides described by the authors, light entering the telescope from the object under investigation is divided into two or four beams by a bilateral prism or a quadrilateral pyramid respectively. The light beam is then modulated by a rotating disc and converted into electrical signals by a photomultiplier. The signals are amplified and fed into a servo-system which corrects the position of the telescope so that the object remains in the required position in the field of view. Depending on the particular problem, the photoguide may be one coordinate or two coordinates. The one coordinate system is illustrated. In this system, light from the telescope is focussed on the edge of the splitting prism

Card 1/2

Alternating current photoguides ...

S/712/60
D218/330

7/10/004/014

so that in the central position of the object the light reflected from each face has the same intensity. In any other position, the intensity reflected from the two faces is not the same, and therefore the modulated light flux intercepted by the photomultiplier has a different wave form. A description is given of the electronic circuit and the servo-system element which produces the difference and reduce the error signal which corrects the position of the telescope through an electro-mechanical system. A calculation of the limiting sensitivity of the photoguide is reported and it is shown that the system can be reliably operated with stars of 5th magnitude and a guide diameter of about 10 cm. A particular feature of the guides is their simplicity and the inclusion of two phase asynchronous motors which are used to produce the error signal. The photoguides were tested at the Crimean Astrophysical Observatory on the 16" double astrograph and the 20" Maksutov telescope. There are 7 figures.

SUBMITTED: April 1959

Card 2/2

VOSKRESENSKIY, P.I.; GORDON, G.M.; TSETLIN, V.M.; Prinimali uchastiye:
BELYAYEV, Ye.N., master; TSESSARSKIY, V.N., laborant; DARCHIYEV,
A.A., master; D'YACHENKO, T.F., laborant

Dust collection at pilot plant electrothermal furnaces with
air-tight charging arrangements. Sbor. nauch. trud. Gintsvetmeta
no.18:187-198 '61.
(MIRA 16:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh
metallov (for Belyayev, TSessarskiy). 2. Belovskiy tsinkovyy
zavod (for Darchiyev, D'yachenko).
(Electric furnaces—Equipment and supplies)
(Dust collectors)

MALININ, Roman Mikhaylovich; ~~BEIYAYEV, Y. P.~~ inzhener-podpolkovnik,
red.; MYASNIKOVA, T.F., tekhn.red.

[Condensers and resistors] Kondensatory i soprotivleniia.
Moskva, Voen.izd-vo M-va obor.SSSR, 1959. 174 p. (MIRA 12:9)
(Electric capacitors) (Electric resistors)

BELEYEV, Ye. V.

BELEYEV, Ye. V. -- "The Development of Measures to Protect Main Pipelines from the Harmful Effects of Mine Work." Min Higher Education USSR. Leningrad Order of Lenin and Order of Labor Red Banner Mining Inst. Leningrad, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

SOURCE Knizhnaya Letopis', No 6 1956

BELIAYEV, Ye.V.
BELIAYEV, Ye.V., inzh.

Effect of mining operations on steel mains. [Trudy] VNIMI no.31:
67-88 '57.

(Mining engineering) (Water pipes)

(MIRA 11:1)

BELYAYEV, Ye. V., Cand Tech Sci -- (diss) "Effect of mining ^{disturbances} ~~on~~ ^{the} underground steel mains under conditions of Donbass." Stalino, 1958.
16 pp (Committee for Supervision of Safe ^{Performance} ~~Execution~~ ^{Operations} of ~~works~~ in Industry
and Mining Supervision ^{under} ~~at~~ the Council of Ministers of USSR. All-Union Sci Res
Mining-Surveying Inst VNIMI, Ukrainian Affiliate), 120 copies (KL, 16-58, 119)

-50-

PORAY-KOSHITS, B.A.; BELYAYEV, Ye.Yu.; SHAPOVSKI, Ye.; ZAYONTS, V.I.

Reaction in which the nitroso group is cleaved off from
aliphatic-aromatic nitrosamines. Dokl. AN SSSR 157 no.3:
629-631 J1 '64. (MIRA 17:7)

1. Leningradskiy tekhnologicheskii institut imeni Leningovets.

BELYAYEV, Yu.; KHITROV, L.

Chemical analysis in a minute. Nauka i zhizn' 29 no.6:60 Je '62.
(MIRA 15:10)

1. Nauchnyye sotrudniki Instituta geokhimii i analiticheskoy
khimii imeni V.I. Vernadskogo AN SSSR.
(Spectrum analysis)

BELYAYEV, Yu.

Creation of socialist industry in the Korean People's Democratic
Republic. Vop. ekon. no.9:60-70 S '58. (MIRA 11:10)
(Korea--Industries)

BELYAYEV, Yu.

Rise in the economy and culture of the Korean People's Democratic Republic ("Development of the national economy and culture of the Korean People's Democratic Republic, 1946-1957" [in Korean]. Reviewed by IU. Beliaev. Vop. ekon. no.4:125-129 Ap '59. (MIRA 12:7)

(Korea--Statistics)

BELIAYEV, Yu.

Two-way recording on the "Dnepr-3" magnetic recorder. Radio no.5:46
My '54. (MLRA 7:5)

(Magnetic recorders and recording)

BELYAYEV, Yu.

"Socialist industrialization of the people's democracies."
Reviewed by IU.Beliaev. Vop. ekon. no.3:131-135 Mr '62.

(Communist countries--Industries)

(MIRA 15:3)

BELYAYEV, Yu., kapitan

The group is ready for flight. Kryl.rod. 13 no.12:3-4 D '62.
(MIRA 16:2)

(Air pilots)

BELYAYEV, Yuriy Aleksandrovich, inzh.

Use of toroidal ferromagnetic cores for the conversion of continuous magnitudes to discrete magnitudes. Izv. vys. ucheb. zav.; elektromekh. 3 no.12:26-31 '60. (MIRA 14:5)

1. Kafedra prikladnoy mekhaniki Moskovskogo gosudarstvennogo universiteta.

(Cores (Electricity))
(Transducers)

9.7/00

1024

S/035/62/000/009/033/060
A001/A101

AUTHOR: Belyayev, Yu. A.

TITLE: An electronic digital computer for controlling the PM-700 (RM-700) telescope

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 9, 1962, 76 - 77, abstract 9A542 ("Izv. Gl. astron. observ. v. Pulkove", 1961, v. 22, no. 4, 171 - 194, English summary).

TEXT: The author describes the design of an electronic digital computer (EDC) intended for controlling the equatorial 700-mm telescope. The EDC automatically aims the telescope at a celestial object and tracks it. The coordinates of the object are set up on the scales of the panel board, and EDC checks and corrects the movement of the telescope (pre-calculates necessary data for each instant of time). EDC operates by the parallel successive principle and performs the following calculational operations: 1) It calculates stellar time S for every instant. 2) Receives right ascension α and declination δ of a star from the panel board. 3) Calculates the values of hour angle t of the star. 4) Determines the true value of the telescope hour angle t_1 (for the given instant). 5) Determines the true value of declination angle δ_1 . 6) Calculates and takes into account corrections for Card 1/4

An electronic digital computer for...

S/035/62/000/009/033/060
A001/A101

mean refraction by hour angle Δr_t and declination Δr_δ . 7) Calculates the magnitude of mismatch by hour angle Δt and declination $\Delta \delta$. 8) Introduces corrections for errors Δt and $\Delta \delta_1$, in the telescope position. Corrections for flexure and dependence of refraction on temperature and pressure are not introduced. EDC operates in the binary system with 19-order numbers (19th order is the order of sign). Accuracy = 5" arc, frequency of repetition of calculation cycles ~ 3.034 per./stellar sec. (in observations of the Moon and planets the frequency varies within the limits - 2.5 + 5%, which is brought about by the mechanism controlling the speed. It is supplied from an audio oscillator, power amplifiers VM , (UM_1) and UM_2 and a frequency divider $ДЧ_1$, (DCh_1) (the frequency supplied from the quartz clock of the time service = 1,000 per./stel. sec.). The carrier frequency ~ 400 cps, modulated by stable frequency of ~ 6.068 per./stel. sec., is obtained from the output of the speed controlling mechanism. In observations of planets the frequency can vary within the indicated limits by regulating the frequency of the audio oscillator. Even after conversion in the frequency divider DCh_2 , starting pulses with sequence frequency $f \approx 3.034$ per./stel. sec. go out, which determine the repetition frequency of the computer operation cycles. Moreover, DCh_2 produces pulses with a

Card 2/4

An electronic digital computer for...

S/035/62/000/009/033/060
A001/A101

frequency $f_m \approx 12.136$ per./stel. sec. controlling the operation of the generator of synchronizing pulses and the generator of single delayed pulses. The former generates series of 20 pulses following each other with a frequency of 2,300 cps, which determines the frequency of orders of binary numbers. Simultaneously, single delayed pulses, shifted relative to each other by the magnitude of one order of a binary number (at its successive representation) are obtained from 19 output bars of the generator of single delayer pulses. These pulses are employed to convert numbers from the parallel form into successive one and back, to form various numbers, to read out code limbs, as well as in the output devices of EDC. A pick-up of switching pulses controls the sequence of operations. It divides every cycle of computer operations into four stages: 1) Picking-up the code of hour angle from a limb mounted on the hour axis of the telescope and its conversion into binary code t_1 . 2) Input, calculation and output of data on coordinate t . 3) Picking-up the code of declination angle from the limb of the declination axis and its conversion into binary code δ_1 . 4) Input, calculation and output of data on coordinate δ . In pauses between two successive stages 2, the working-out of t -axis error is carried out by means of devices for fine correction control, $YYTK -t$ (UUTK- t) and rough guidance, $YYTH-t$ (UUGN- t); simultaneously in pauses between two successive

Card 3/4

An electronic digital computer for...

S/035/62/000/009/033/060
A001/A101

stages 4, circuits UUTK- δ and UUGN- δ switch on the working-out for δ -axis. Calculation of data on t and δ is performed by the same device in EDC. The limbs on axes t and δ of the telescope are marked by the Grey code. Reading out is conducted by means of successively flashing neon tubes (from delayed pulses) and photomultipliers. The Grey code obtained is transformed into a conventional binary code in the code converter and is fed into a universal arithmetic device (where corrections for mean refraction by hour angle and declination are inserted); codes of time t and angle δ are also fed there for summing or subtraction. Quantities t_2 and δ_2 are fed from the output of the universal device into the subtracting circuit Δ_2 where mismatching errors in t and δ are calculated. The control of servomechanisms is conducted in dependence on the magnitude and sign of errors. The speed of rough guidance is constant. It functions at an error larger or equal to $29.4''94$. The working-out at an error lesser or equal to $(2^6 - 1) \cdot 4''94$ is conducted with a speed proportional to the magnitude of the error. The computer has been constructed mainly on electronic tubes (~ 300). There are 10 references.

L. Kotlyar

[Abstracter's note: Complete translation]

Card 4/4

GALSTYAN, N.O., inzh.; KOMISSAROV, S.G., inzh.; BELYAYEV, Yu.A., inzh.

Manufacture and assembly of precipitation tanks in construction
of the Pavlodar aluminum plant. Mont. i spets. rab. v stroi.
23 no.12:5-9 D '61. (MIRA 15:2)

1. Trest StroyMontazh.

(Kazakhstan--Aluminum industry and trade)

BELYAYEV, Yu.A.

Physicochemical properties of plutonium (Pu^{239}) in the blood
following intravenous administration. Med.rad. 4 no.9:45-51
S '59. (MIRA 12:11)
(PLUTONIUM blood)

BEKYAYEV, Yu.A.

Effect of diaminocyclohexantetraacetic acid calcium disodium
on plutonium metabolism in rats. Med.rad. 5 no.2:54 F '60.

(MIRA 13:12)

(PLUTONIUM METABOLISM) (EDATHAMIL CALCIUM DISODIUM)

BELYAYEV, Yu.A.

Use of ion exchange resins in the removal of plutonium from the
gastrointestinal tract. Med.rad. 5 no.3:44-47 '60.

(ION EXCHANGE)

(PLUTONIUM)

(DIGESTIVE ORGANS)

(MIRA 13:12)

28249

S/581/61/000/000/020/020
D299/D304

27.2400

AUTHOR: Belyaev, Yu.A.

TITLE: Possible ways of affecting the excretion of plutonium from animals

SOURCE: Lebedinskiy, A.V. and Moskalev, Yu.I., eds. Biologicheskoye deystviye radiatsii i voprosy raspredeleniya radioaktivnykh izotopov; sbornik rabot. Moscow, Gosatomizdat, 1961, 182-189

TEXT: A study was made of the removal of plutonium from rats. The study covered: 1) the efficacy of various therapeutic measures against plutonium which has entered the gastrointestinal tract, and 2) the comparative efficacy of certain complexones in the event of the parenteral introduction of plutonium into rats in the early and remote stages after contamination. The rats were given a solution of plutonium salts containing: a) 4-valent plutonium nitrate and b) plutonium citrate complex with a 3% final concentration of sodium

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Possible ways of affecting...

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D299/D304

citrate. The dose ranged from 0.12 to 0.27 $\mu\text{c/kg}$ of the animal's weight. An aqueous suspension of ion-exchanging resins was then administered in a dose of 0.2 g per rat 5-10 min in series I-V and one hour in series VI and VII after contamination with plutonium. Both anionites (ЭДЭ-10 (EDE-10), АН-2Ф (AN-2F)) and cationites (КУ-2 (KU-2)) were used as ion-exchangers. The results of their efficacy are tabulated. With the introduction of EDE-10 one hour after contamination the plutonium content in the skeleton and liver was only 60% of the control animals', while no effect was noted for KU-2. This was due to the rate of plutonium resorption from the gastrointestinal tract. After 2 hours, resorption reaches its maximum and all the plutonium capable of metabolism and resorption disappears from the ionites' sphere of action. After 2 hours about 80% of the resorbed plutonium is distributed in the blood. This led the author to try out intravenous injection of complexone in the hope that it would reduce further resorption of plutonium from the blood into the organs and would therefore reduce the plutonium content in these organs. A study was made of the change in the plu-

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S/581/61/000/000/020/020
D299/D304

Possible ways of affecting...

tonium content of the blood with time and with its resorption from the gastrointestinal tract. Single intravenous injection of 100 mg/kg of diethylene triaminopentaacetic acid into rats 30 min, and 1, 2 and 4 hours after the administration of plutonium decreased the plutonium content in the skeleton by 5 times and in the liver by 8-11 times in the first 3 days; subsequently the effect was somewhat diminished. The treatment was therefore effective at a time when the use of ion-exchanging resin had no effect. The method could also be used against contamination of the skin and lungs with plutonium and its subsequent resorption into the blood. The author also studied the efficacy of the commonly used ЭДТА (EEDTA) and ДТНА (DTPA) complexones and another ЭДТА (EDTA) derivative, dinitrocarboxymethylethylene diamino-bis-methylphosphate acid, or ЭДФА (EDFA), for removing deposited plutonium from rats. EEDTA was used as $\text{CaNa}_2\text{EEDTA}$, DTPA as CaNa_3DTPA , and EDFA as $\text{Ca}(\text{NH}_4)_2\text{EDFA}$. The dose ranged from 100 to 240 mcM per rat. It was found that with intravenous injection of DTPA the plutonium content in the skeleton was approximately 9 times less, and in the liver 2 times less, than with

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X

Possible ways of affecting...

28249
S/581/61/000/000/020/020
D299/D304

the use of EEDTA. This differing efficacy was preserved at other stages of the investigation. In the acute stage of the experiment EDFA was intermediate between DTPA and EEDTA, but diminished greatly in efficacy at later stages. The number and rhythm of the injections had a substantial influence on the end effect of the treatment. Eight injections of DTPA had less effect than 12. One injection a day had as much effect as two, etc. There are 1 figure, 5 tables and 9 references: 2 Soviet-bloc and 7 non-Soviet-bloc. The references to the English-language publications read as follows: H. Forman, W. Moss and B. Eustler, Amer. J. Roentgenol., 79, 6, 1071 (1958); A. Catsch and D.Kh. Lø, Nature, 180, 609 (1957); V.H. Smith, Nature, 181, 4626, 1792 (1958).

X

Card 4/4

44059

S/742/62/000/000/001/021
I015/I215

27 1220

AUTHORS: Belyayev, Yu.A., Konstantinova, V.V., and Yelkina, N.I.

TITLE: Distribution of plutonium in rabbits

SOURCE: Plutoni-239; raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya. Ed. by A.V. Lebedinskiy and Yu.I. Moskalev. Moscow, Medgiz, 1962, 7-11

TEXT: Most of the earlier studies on the distribution and excretion of plutonium were carried out on small laboratory animals. Present experiments were carried out on rabbits, male and female, weighing 2.5-3.0 kg. Plutonium nitrate (pH=2) was injected i.v. at doses of 2-7 μ Cu/kg, and the animals were sacrificed 1, 7, 14 days, and 1, 3, 4, 5, 6, 9, 12 months after injection. Yu.A. Belyayev's method was used in order to determine the amount of plutonium in the bones, liver, kidneys, spleen, lungs, muscles, bone marrow and gastro-intestinal tract. The excretion from the liver where it was concentrated

Card 1/2

S/742/62/000/000/001/012
I015/I215

Distribution of plutonium...

up to 70% occurred very slowly - 43% of the plutonium was still present after 6 months, and 21.7% after one year. The initial concentration in the bones was 20-30%, but reached a value of 43% after 6 months. The plutonium concentrated in the spongy more than in compact bones, and settled in the marrow when administered in the form of $\text{Pu}(\text{NO}_3)_4$. There are 1 figure and 3 tables.

Card 2/2

44061

S/742/62/000/00/003/021
I015/I215

27.3520

27.1220

AUTHORS: Belyayev, Yu.A., Yelkina, N.I., Konstantinova, V.V.,
and Tseveleva, I.A.

TITLE: The toxicologic characteristics of sodium-plutonyl-
triacetate and its distribution in rats

SOURCE: Plutoni-239; raspredeleniye, biologicheskoye
deystviye, uskoreniye vyvedeniya. Ed. by A.V.
Lebedinskiy and Yu.I. Moskalev. Moscow, Medgiz,
1962, 19-22

TEXT: This plutonium salt has been studied little. Experiments
were carried out on 260 rats and 49 control animals weighing 120-150 g.
The doses of freshly prepared, i.p. injected plutonium salt (pH = 6.5)
were 21, 11, 6.3, 3.3 and 1.6 μ Cu/kg b.w. Three animals from each dose
group were sacrificed at various time-intervals after injection and

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I015/I215

The toxicologic characteristics...

their organs were examined for the presence of plutonium. The results of the histologic examination are reported by A.P. Nifatov in a separate article. The blood picture was studied in 10 animals of each group on the 1st, 2nd and 3rd week and 1st, 2nd, 3rd and 6th month after injection. The determination of plutonium in the organs was carried out by Yu.A. Belyayev's method. It was found that the distribution of $\text{NaPuO}_2(\text{CH}_3\text{COO})_3$ in the various organs was very much the same as that of other plutonium compounds. The deposits in the bones of the plutonium compound studied accounted for 50-60% of the injected dose, but decreased gradually down to 27% 18 months after the injection. The distribution of Pu in organism was independent of the dose. The doses of 3.3 and 1.6 $\mu\text{Ci}/\text{kg}$ b.w. were the most carcinogenic, whereas the latter dose did not affect the average life-span of the rats. There are 3 tables.

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44065

S/742/62/000/000/007/021
I015/I215

271220

AUTHOR: Belyayev, Yu.A.

TITLE: Chemical forms of plutonium (Pu^{239}) in the liver and spleen of rats

SOURCE: Plutoni-239; raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya. Ed. by A.V. Lebedinskiy and Yu.I. Moskalev. Moscow, Medgiz, 1962, 45-51

TEXT: The physico-chemical state of Pu in the blood has been studied previously. Experiments were carried out on the liver and spleen of rats which were injected i.p. with either plutonium nitrate ($\text{pH} = 2.0$) or the citric acid complex ($\text{pH} = 6.5$). The dose of plutonium was 3.6-4.9 $\mu\text{g/kg}$ b.w. Acid soluble fractions, lipids, nucleic acids and proteins were separated from the organ homogenates by the

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S/742/62/000/000/007/021
I015/I215

Chemical forms of plutonium...

method of Schneider and by that of Davidson. Globulins, albumins and residual proteins were separated from the liver by the method of Lak too. The nuclei were separated from the cytoplasm by repeated extractions with physiologic solution at pH = 6.0-6.2. The amount of plutonium was determined by the author's method. It was found that plutonium in the liver was mainly bound to proteins. About 50% of Pu in the liver was bound to cytoplasmic globulins. The distribution in the nuclei was as follows: 17-24% was bound to DNA, 12-16% to acid proteins and 1.5-4.0% to residual proteins. The Pu contents of the liver proteins was the same during 2 months after the injection; thus the chemical form of the injected Pu did not affect this phenomenon. In the spleen there was a lower concentration of Pu in the DNA fraction (5-8%) than in the liver. The Pu complex with DNA was more stable than that with RNA, probably due to the high polymerization of the former. There are 5 tables.

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44078

S/742/62/000/000/020/021

I015/I215

27 1220

AUTHOR: Belyayev, Yu.A.

TITLE: The effect of ion-exchange resins and chelating agents on the distribution of plutonium introduced per os

SOURCE: Plutoni-239; raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya. Ed. by A.V. Lebedinskiy and Yu. I. Moskalev. Moscow, Medgiz, 1962, 151-155

TEXT: This is a first report on the effect of i.v. administration of a chelating agent (diethylenetriaminepentacetic acid-DTPA) on the plutonium distribution. Experiments were carried out on female rats weighing 200-220 g. Plutonium nitrate (pH = 2) and the citric acid complex (the final concentration of sodium citrate = 3%, the pH = 6.5) were introduced by a gastric tube into the stomach (120-

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S/742/62/000/000/020/021
I015/I215

The effect of ion-exchange resins...

270 μ Cu/kg b.w.). The animals received per os 0.2 g of an ion exchange resins 5-10 min. and one hour after the administration of Pu. The cationite employed was KY-2 (KU-2) and the anionites were EDE-10 (EDE-10) and AH-2 ϕ (AN-2f) previously treated with either hydrochloric or nitric acid. The chelating agent (100 mg/kg b.w.) was administered i.v. $\frac{1}{2}$, 1, 2 and 4 hours after the introduction of Pu. The animals were sacrificed after 72 hours and Pu was determined in both the bones and liver. The ion exchange resins brought about a decrease in the absorption of Pu by the intestines and, consequently, the level of Pu in the bones and liver was markedly lower in animals which received either anionites or cationites. There was a direct dependence between the efficiency of the ion exchangers and the rate of intestinal absorption of Pu. The calcium-trisodium salt of DTPA turned out to be an efficient agent in removing the Pu absorbed via the G-I tract, if administered i.v. There are 1 figure and 2 tables.

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44079

S/742/62/000/000/021/021
I015/I215

271220

AUTHOR: Belyayev, Yu. A.

TITLE: The effect of chelating agents on the removal of plutonium from rats

SOURCE: Plutony-239; raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya. Ed. by A.V. Lebedinskiy and Yu.I. Moskaev. Moscow, Medgiz, 1962, 156-161

TEXT: Efficient methods for the removal of radioisotopes from tissues have not yet been found until now. Experiments were carried out on female rats weighing 180-200 g. Pu citrate ($4.4 \mu\text{g/kg b.w.}$) was administered i.p. and i.v. The following chelating agents were tested: 1,2-diaminocyclohexanetetracetic acid (DCTA), ethyletherdiaminetetracetic acid (EEDTA), diethylenetriaminepentacetic acid (DTPA),

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S/742/62/000/000/021/021
I015/I215

The effect of chelating agents...

di-N-carboxymethylethylenediamine-bis-methylphosphoric acid (EDPA). These agents were administered i.p. and i.v. (100 μ moles for repeated injections and 240 μ moles as a single dose). The chelating agents were administered either simultaneously with Pu or 2, 6, 24 hours and 30 days after the injection of Pu. In order to determine the Pu activity in the body excreta a series of experiments in metabolic cages were also carried out. It was found that CaNa_2EDTA and CaNa_3DTPA were efficient as Pu removing agents also at remote periods after the injection of the radioisotope. The former was more efficient than the latter, especially in acute experiments, but repeated administrations abolished these differences. The calcium-diammonium salt of EDPA was efficient only in acute experiments and lost much of its efficiency if administered 24 hours after the injection of Pu. DOTA

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S/742/62/000/000/021/021
I015/I215

The effect of chelating agents...

turned out to be practically non-efficient in removing Pu from the bones. In the liver it brought about a slight decrease in Pu contents (about one half), thus resembling the effect of EDTA. There are 5 tables.

X

Card 3/3

BELYAYEV, Yu.A., inzh.

Progressive methods of assembling electrolyzers in the aluminum industry. Mont.i spets.rab.v stroi. 24 no.11:6-9 N '62.
(MIRA 15:12)

1. Vsesoyuznyy montazhnyy trest Glavshakhtostroya Ministerstva tsvetnoy metallurgii SSSR.
(Volgograd—Aluminum plants)

L 12969-63
RM/WW
ACCESSION NR: AP3000403
EPR/EWP(j)/EPP(c)/EWT(m)/BDS AFFTC/ASD Ps-4/Pc-4/Pr-4
S/0191/63/000/005/0053/0056
75
73
AUTHOR: Voloshenko-Klimovitskiy, Yu. Ya.; Belyayev, Yu. A.; Korenkov, Yu. A.
TITLE: Investigation of the impact stretch of glass-fiber compositions at normal and low temperatures
SOURCE: Plasticheskiye massy*, no. 5, 1963, 53-56
TOPIC TAGS: impact tension, glass-fiber compositions, phenol-formaldehyde resins
ABSTRACT: Methods for assessing the dynamic properties of viscous fiber-glass compositions leave much to be desired; only their impact strength has been determined. The authors have devised a method for testing the impact tension of these materials at normal (+20C) and low (-196C) temperatures, using equipment at the Laboratoriya prechnosti mashinostroitel'nykh materialov (Machine-building Materials Strength Laboratory) of IMASH GKA i M. Used for the tests were two experimental formulations of AG-4SV (phenol formaldehyde resin with a filler of oriented glass fibers, equistable and unidirectional, respectively). Because of the low plasticity of these materials, only the stress impulse need be recorded. Hence the apparatus required is less complicated than in the case of metals. A single-beam impulse oscillograph (10-4) gave satisfactory results. Low temperature increased the strength of the AG-4S formulations, even during impact stress. The increase was negligible, how-
Cord 1/2

L 12969-63
ACCESSION NR: AP3000403

2
ever, when cold and stress were applied simultaneously, as compared with their separate application; in some cases, in fact, strength was reduced when low temperature and stress were brought to bear simultaneously. "The authors thank Ye. I. Stepanychev and Ye. F. Vasil'yev for their assistance in procuring the samples of glass-fiber compositions used in the studies." Orig. art. has: 4 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 10Jun63

ENCL: 00

SUB CODE: MA

NO REF SOV: 004

OTHER: 000

Cord 2/2

ACCESSION NR: AP4039947

S/0191/64/000/006/0039/0040

AUTHOR: Voloshenko-Klimovitskiy, Yu. Ya.; Belyayev, Yu. A.; L'vov, B. S.; Shpakovskaya, Ye. I.

TITLE: Impact tensile strength at +20 and -196 C of glass reinforced plastics based on PN-1 binder cured at low temperatures

SOURCE: Plasticheskiye massy*, no. 6, 1964, 39-40

TOPIC TAGS: glass reinforced plastic, glass fabric T-1, polyester resin PN-1, impact tensile test, static tensile test

ABSTRACT: The authors have developed at the Laboratory of the Strength of Materials for Machine Building of the IMASH GKA i M a method for impact tensile tests of glass reinforced plastics (GRP). This method makes it possible to determine the tensile strength in uniaxial stretching and can be used for calculating mechanical strength. It was applied to T-1 glass fabric-reinforced unsaturated polyesters resin PN-1. The GRP were subjected to static and impact tests. The results, which are given in Fig. 1 of the enclosure, show that PN-1-based GRP possess a good "dynamic strength reserve" both at +20 and -196 C. Orig. art. has 1 figure and 1 table.

Card 1/3

ACCESSION NR: AP4039947

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 24Jun64

ENCL: 01

SUB CODE: MT

NO REF SOV: 002

OTHER: 000

Card 2/3

ACCESSION NR: AP4039947

ENCLOSURE: 01

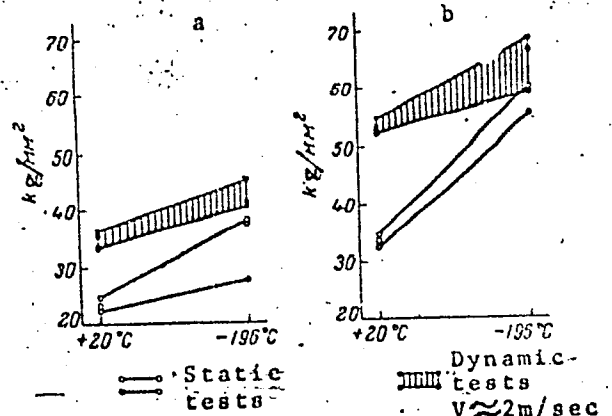


Fig. 1. Results of static and dynamic tensile tests of PN-1-based glass-reinforced plastics at $+20$ and -196°C .

a - Along the weft; b - along the warp.

BILETSKIY, S.M.; PASHCHIN, A.N.; GALSTYAN, N.O.; BELYAYEV, YU.A.

Making an apparatus for the reduction of alunite. Avtom.
svar. 17 no.9:71-74 S '64. (MIRA 17:10)

1. Institut elektrosvarki im. Ye.O. Patona AN UkrSSR (for
Biletskiy, Pashchin). 2. Trest "Stroymontazh" (for Galstyan,
Belyayev).

BELYAYEV, Yu.A.

Comparative effectiveness of some complexons in removing plutonium-239 from the animal organism. Radiobiologiya 4 no.5:760-763 '64.
(MIRA 18:4)

VOLOSHEVICH-LEMOVITSKIY, Yu.Yu.; BELYAYEV, Yu.A.; LEVOV, B.S.; CHIRKOVSKAYA, Ye.I.

Strength of cold cured PM-1 bonded glass plastics under the conditions of impact tension at normal (+20°C) and low (-196°C) temperatures. Plast.massy no.6:39-40 '64.

(MIRA 18:4)

LEBEDEV, B.F.; PASHCHIN, A.N.; IVANOV, A.D.; BELYAYEV, Yu.A.

Industrial method of making an apparatus for calcining alunita.
Avtom.svar. 18 no.1:66-68 Ja '65. (MIRA 18:3)

1. Institut elektrosvariki im. Ye.O.Patona AN UkrSSR (for Lebedev, Pashchin, Ivanov). 2. Stroitel'no-montazhnyy trest Gosudarstvennogo proizvodstvennogo komiteta po montazhnym i spetsial'nym rabotam (for Belyayev).

22642

S/144/60/000/012/002/005
EO31/E335

9.7300

AUTHOR: Belyayev, Yu.A., Engineer

TITLE: On a Method of Using Ferrite Cores for Analog-digital conversion

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1960, No. 12, pp. 26 - 31

TEXT: Analog-digital and digital-analog conversions are becoming increasingly necessary as analog and digital computers are used together in automatic-control systems. The quantity to be digitised is an electric current which varies between 0 and 1 A with a frequency of 1 c.p.s. The interval of the changes was sub-divided into individual values, spaced at equal time intervals. Each of the current values was individually digitised, using a toroidal ferrite core which carried four windings, W_1 , W_2 , W_3 and W_4 , with a suitable number of ampere turns. The winding W_1 was the input winding for the triggering pulses; W_2 supplied the output pulses. The slowly-changing current to be digitised was fed into the

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22642

S/144/60/000/012/002/005
E031/E335

On a Method of Using

winding W_3 , whilst the winding W_4 was connected to a DC source and was wound so as to generate a magnetic field in the direction opposite to that of the winding W_3 . Square-topped pulses were fed into the winding W_1 . When this current reaches a value leading to an equality between the ampere turns in winding carrying the current and that connected to the constant voltage, pulses are generated in the fourth winding. These pulses are recorded in decimal form and later converted to binary. Diodes are included in the circuitry to prevent the appearance of spurious pulses. Because of variations in the cores stabilisation of the amplitudes of the pulses is necessary and this is achieved by including resistances in the discharge busbars. Two circuit arrangements - one for parallel output and the other for series output - are illustrated and described. There is a discussion of the properties of cores giving reasons why cores of type K-222 were chosen. An experimental model with 22 cores was built, the parallel output form being adopted. The windings W_1

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22642

S/144/60/000/012/002/005

EO31/E335

On a Method of Using

were fed with 100 V, 10 kc/s, square-topped pulses of 7 ms duration. The triggering loops were excited by pulses with an amplitude of 10 V; the pulses on the output windings W_2 showed a scatter of 10 - 30 V. In the order in which the windings were discussed above, the number of turns was chosen to lie in the ranges: 35-100, 5-71, 36-80 and 35-100. The experimental model made a binary recording of 33 values of a continuous current varying between 0 and 1 A. The model showed that the method could be made to work successfully. There are 3 figures.

ASSOCIATION: Kafedra prikladnoy mekhaniki Moskovskogo gosudarstvennogo universiteta (Department of Applied Mechanics of Moscow State University)

SUBMITTED: August 20, 1960

Card 3/3

ACCESSION NR: AT3008538

S/2984/63/000/000/0023/0027

AUTHORS: Belyayev, Yu. A.; Gerasimova, T. S.; Dravskikh, Z. V.; Mikhel'son, N. N.; Sumin, V. S.; Shkutova, N. A.; Shumakher, A. V.

TITLE: Control system for the RM-700 telescope

SOURCE: Novaya tekhnika v astronomii; materialy* soveshch. Komissii priborostroyen. pri Astronom. sovete AN SSSR, Moskva, 18-20 apr. 1961 g. Moscow, Izd-vo AN SSSR, 1963, 23-27

TOPIC TAGS: control system, automatic control, RM 700 telescope, telescope, ETsUM digital control machine

ABSTRACT: A 700-mm reflector telescope (called the RM-700) has just been built at the Pulkovskaya observatoriya (Pulkovo Observatory). It will be equipped with a double control system. One aspect is a semiautomatic control from a key or with one of two panels operating by semiautomatic control. The position of the telescope will be computed on this panel, each coordinate having a double-metering selsyn connection operating as an indicator. The hour mechanism will be a synchronous motor, supplied by a quartz-crystal clock. The second part of the system is

Card 1/2

ACCESSION NR: AT3008538

automatic control by means of a digital electronic control device (ETsUM). This device has been described by Yu. A. Belyayev (1961, Izv. GAO AN SSSR, 169). It operates with a binary code of sidereal time, computed in angular scale from the panel. This involves the use of a quartz-crystal clock running on sidereal time, a frequency divider and power amplifier, a frequency converter, and a cumulative adder. The operation of the parts is described in considerable detail. "B. N. Batanov (deceased), Yu. N. Gell', and A. V. Korolev participated in this work." Orig. art. has: 7 figures.

ASSOCIATION: Glavnaya astronomicheskaya observatoriya AN SSSR (Main Astronomical Observatory AN SSSR)

SUBMITTED: 00

DATE ACQ: 16Oct63

ENCL: 00

SUB CODE: AA, IE

NO REF SOV: 004

OTHER: 000

Card 2/2

L 34120-65 ENG(j)/EWT(m) GS
ACCESSION NR: AT5006140

S/0000/64/000/000/0338/0342

AUTHOR: Belyayev, Yu. A.

TITLE: Oral administration of some complexing agents to remove plutonium from rats

SOURCE: Raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya radio-aktivnykh izotopov (Distribution, biological effect, acceleration of the excretion of radioactive isotopes); sbornik rabot. Moscow, Izd-vo Meditsina, 1964, 338-342

TOPIC TAGS: plutonium-239, radioisotope, radioactivity, bone, complexing agent, liver, therapy

ABSTRACT: Experiments were performed on male rats given 0.65 to 1.01 μCi of Pu^{239} intraperitoneally. The complexing agents were administered orally through a stomach sound at various intervals after the injection of plutonium. EDTA (ethylenediaminetetra-acetic acid) and DCTA (1,2-diaminecyclohexanetetra-acetic acid) proved to be wholly ineffective in removing plutonium from the skeleton or liver. EDPA (ethylenediaminebis-acetic-bimethylphosphinic acid) was effective only when used 2 or 6 hours after the injection of plutonium. The repeated use of EDTA (ethyl-ester-diaminetetra-acetic acid) within 24 hours reduced the amount of plutonium both in the liver (1.6-fold) and in the skeleton (65% of the control). But when

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used after 30 days, it affected mainly the plutonium content of the liver (reduced it by half). DTPA (diethylenetriaminepenta-acetic acid) was the most effective of the agents, for it reduced the amount of plutonium in the liver and skeleton regardless of when it was used. Administered 30 days after the injection of plutonium, it reduced the amount of the isotope in the liver 4.5 times, in the skeleton 1.6 times (61% of the control). Orig. art. has 3 tables.

ASSOCIATION: none

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AUTHOR: Belyayev, Yu. A.; Lemberg, Y. K.

TITLE: Effectiveness of diethylenetriaminopenta-acetic acid (DTPA) after intratracheal administration of plutonium to rats

SOURCE: Raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya radioaktivnykh izotopov (Distribution, biological effect, acceleration of the removal of radioactive isotopes); sbornik rabot. Moscow, 1974. No. 1. P. 10-12. 10 refs.

TOPIC TAGS: plutonium-239, radioisotope, radioactivity, liver, lung, chelating agent, therapy

ABSTRACT: Following the intratracheal administration of Pu^{239} as a chloride salt or carbonate complex, DTPA proved to be effective in removing the isotope from the lungs even when applied soon afterward. Intraperitoneal administration of DTPA was somewhat more effective than intratracheal. Eighty per cent of the injected plutonium pentacarbonate injected intravenously was retained in the liver. The amount of Pu^{239} excreted with urine was 0.1%; with feces, 1.7% (from the 1st to 10 days). A single intraperitoneal injection of DTPA (24 hours after intratracheal injection of the carbonate complex of plutonium) reduced the amount of Pu^{239} in the

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liver by 23% of that in the control. The author concludes that it is much more difficult at present to remove plutonium from the lungs than from the skeleton. Orig. art. has 4 tables.

ASSOCIATION: none

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BELYAYEV, Yu.A.

Pattern of cerium fixation by protein. Biokhimiia 28 no.4:
635-638 J1-Ag '63. (MIRA 18:3)